

SHUMATECH

DRO-550 Software Upgrade Guide



Revision History

Revision	Description
1	Initial release
2	Updated to use BOSSA instead of SAM-BA

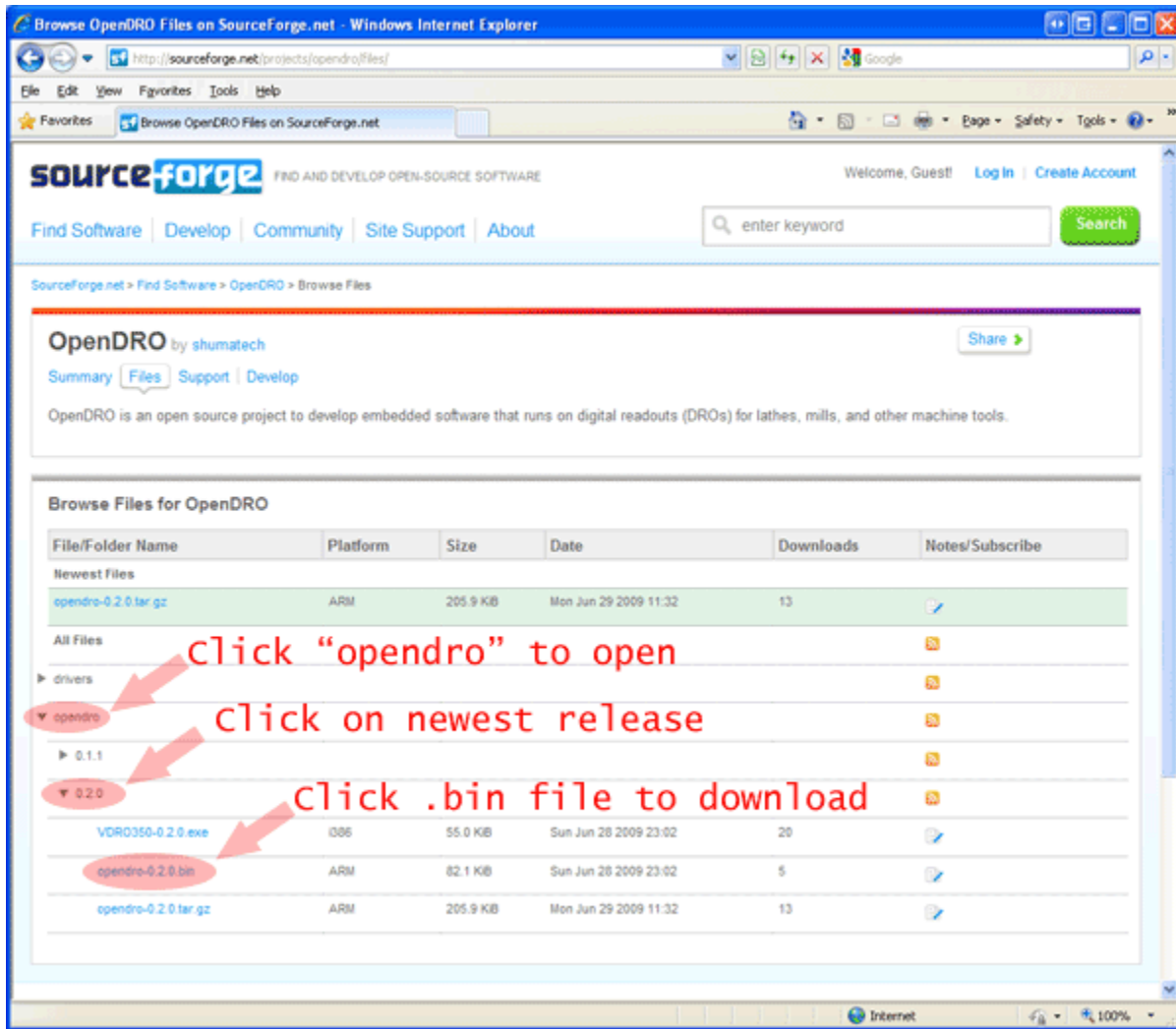
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The steps below describe how to download and install [OpenDRO](#) onto the DRO-550.

Step 1. Download the OpenDRO Image

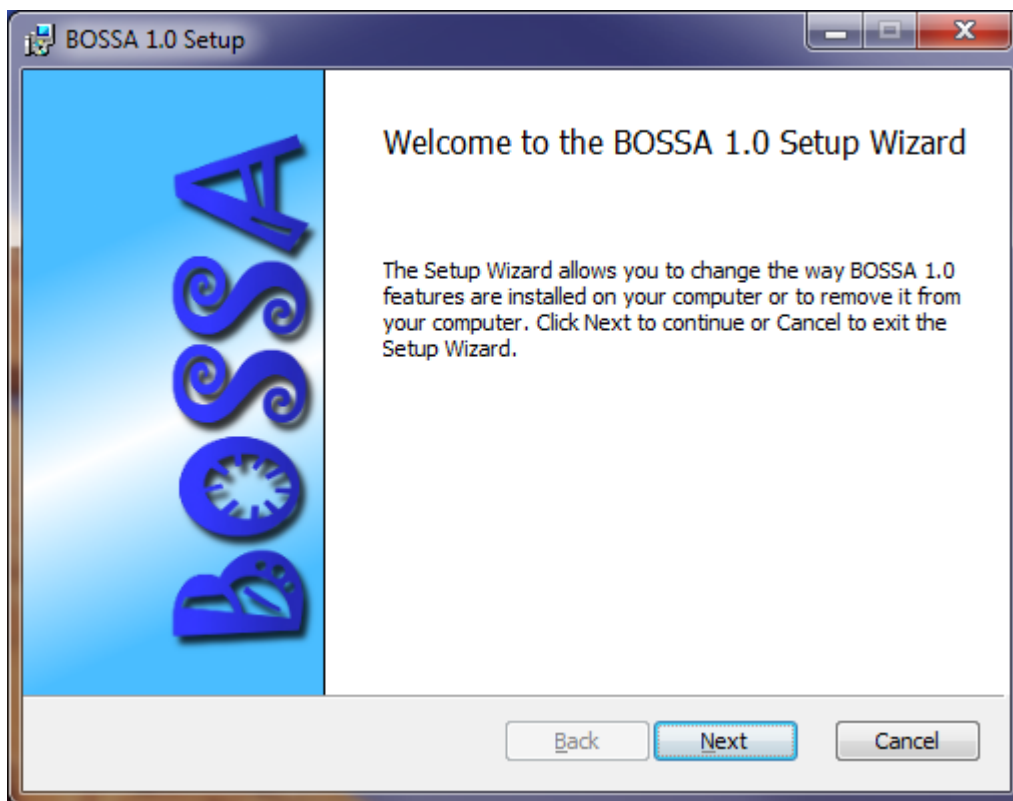
The OpenDRO release images are available for download on the [Files Section](#) of the OpenDRO SourceForge project. Download the latest binary image, which is a file ending in .bin, that is appropriate for your hardware configuration. With a basic DRO-550 and if the latest OpenDRO release is 0.3.2, then you should download the file named opendro-dro550-base-x.y.z.bin where x.y.z are the the release numbers. If you have an LCD-200 attached to your DRO-550, then you should download opendro-dro550-lcd-x.y.z.bin. Note the "base" and "lcd" keywords in the file name. Save this file to your Desktop or somewhere convenient.



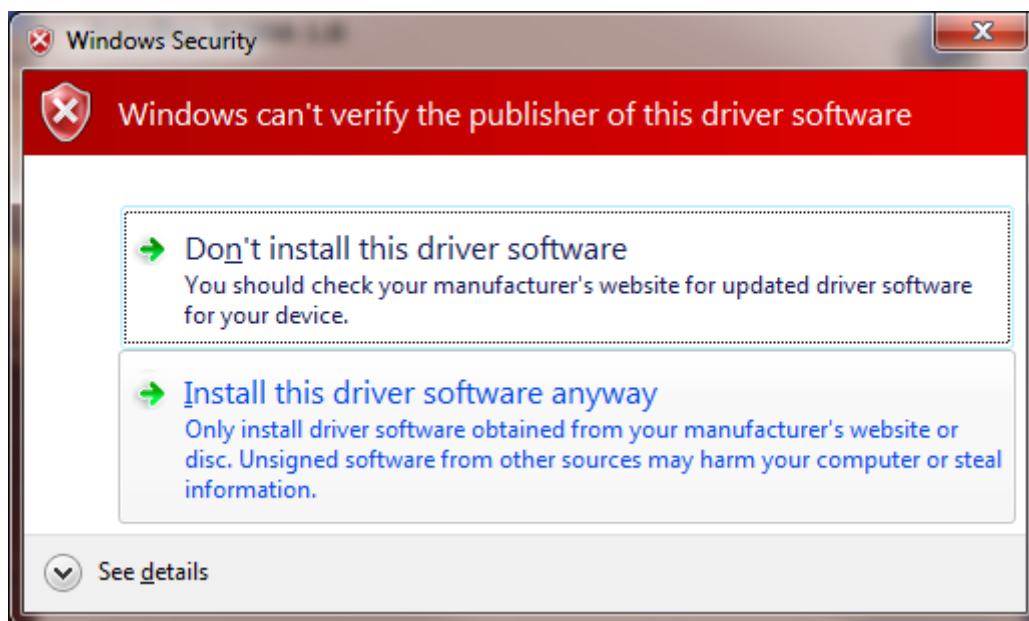
Step 2. Install BOSSA

[BOSSA](#) is used to transfer the OpenDRO binary image to the DRO-550 from your PC via the USB or RS-232 connections. BOSSA is available in both Windows and Linux versions for 32-bit and 64-bit systems. [Download](#) the one that is appropriate for your system. We will only cover the Windows setup process here.

Execute the BOSSA setup wizard that you downloaded above. Click on the Next> button and then select the check box if you agree with the end-user license agreement. Press the Next> button again and choose a new Destination Folder or accept the default. Press the Next> button and then press the Install button to install BOSSA on your system.



During the installation process, Windows may ask if you want the setup program to make changes to your system which you should answer Yes to. Windows will also warn you that you are installing an unsigned driver or that the publisher can't be verified. You should allow the driver installation to proceed otherwise the USB CDC driver that BOSSA depends on will not be installed.



Step 3. Place the DRO-550 in Program Mode

If you have never programmed your DRO-550, then it is already in program mode and you can proceed on to the next step. If you already have OpenDRO installed on the DRO-550, then plug power into your DRO-550 and enter the main menu by pressing the FUNC key. Press the Y key until you reach the system menu ("sys" on the display). Press the Z key until you reach the update selection. Press the ENTER key and you will see a message to press ENTER again to confirm. You should now disconnect the power from the DRO-550.

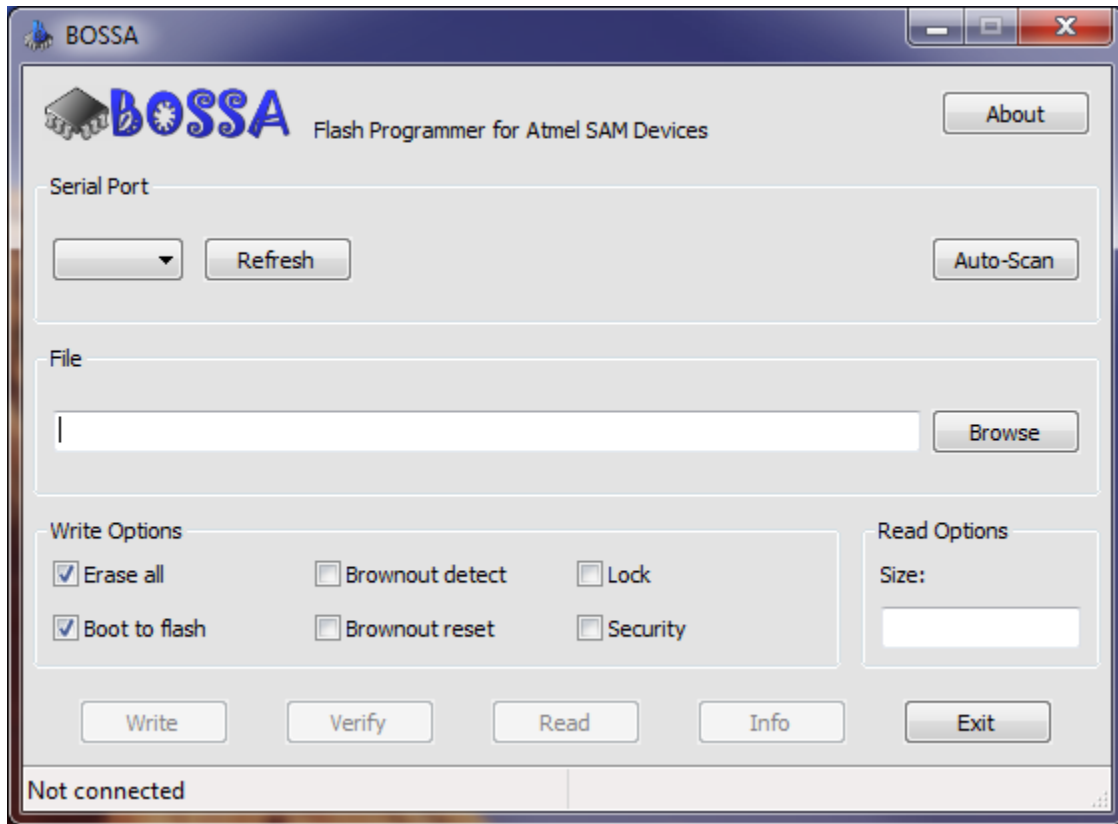
If for some reason, the OpenDRO software becomes corrupted or will otherwise not run, you can use the program switch to place the DRO-550 into program mode. To do this, open the DRO-550 and locate the program switch on the lower left of the board on the side that has the keys and LED display. Plug power into the DRO and press the program switch for one second. The DRO-550 display will go blank and it will enter program mode.

Step 4. Connect the DRO-550 to the PC

You will need a [Type B](#) USB cable to connect the DRO-550 to the PC. Connect the Type A end to your PC and the Type B end to the DRO-550. You should get the standard Windows "Found New Hardware Wizard" dialog box. Select the option to "Install the software automatically" and press the Next> button. After a few seconds, the wizard should report that it is finished and you can press the Finish button to close the dialog.

Step 5. Start BOSSA

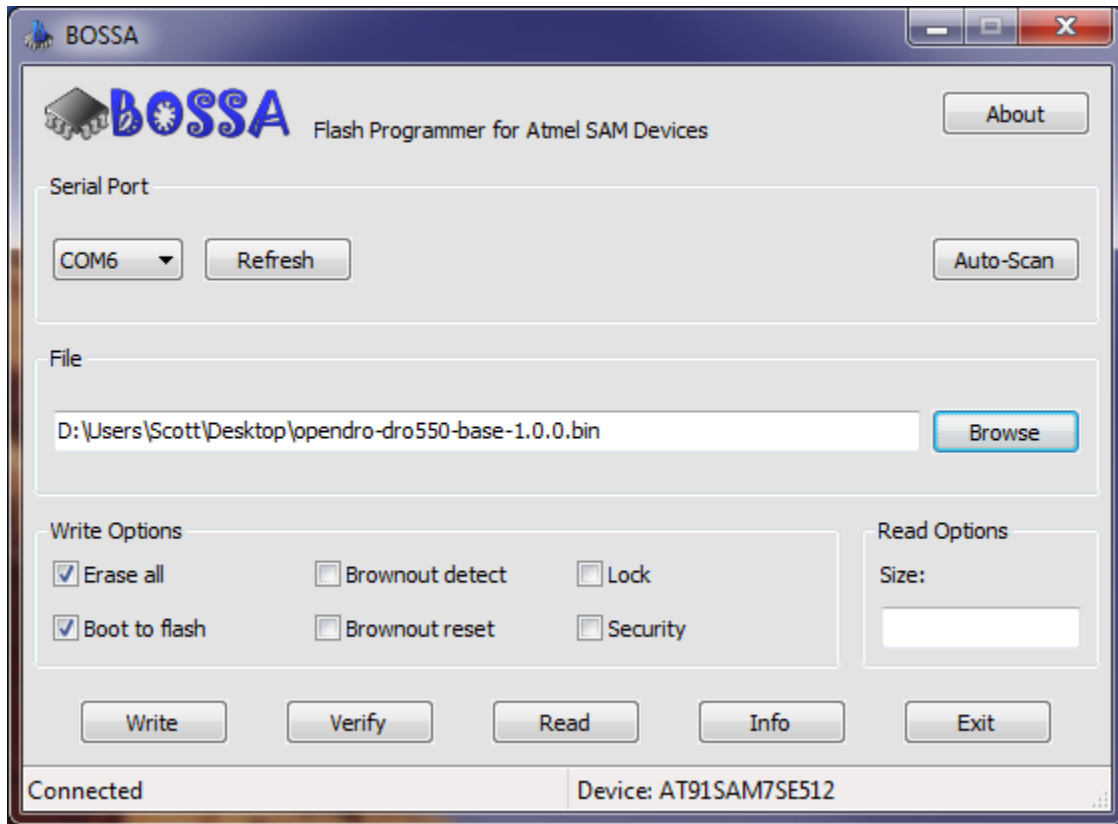
The BOSSA program is found on your Windows Start menu. You should see a main window that looks like this:



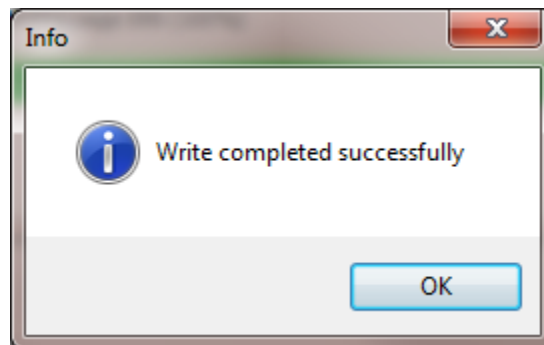
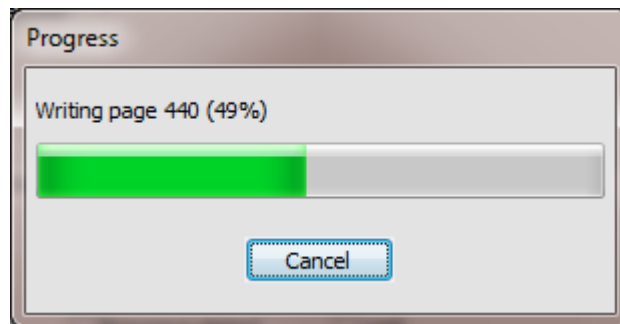
Click on the the Auto-Scan button in the Serial Port group box to find your DRO-550. If no DRO-550 is found, then you should open your Windows Device Manager and look at the entries under the Ports (COM & LPT) list. You should see an entry for "BOSSA Program Port" (or possibly "GPS Camera Detect" for Windows 7). If not, check your DRO-550 board and try plugging it in again after rebooting your PC.

Step 6. Write the OpenDRO Image

Click on the Browse button and select the OpenDRO image you saved from Step 1. Make sure the "Erase all" and "Boot to flash" Write Options are checked and the other options are not. Click the Write button on the bottom to start programming your DRO-550.



You will see a progress window followed by a dialog box telling you the result of the write operation.



Step 7. Verify the OpenDRO Image

After the write completes successfully, click on the Verify button to verify the contents of the DRO-550 flash memory. You should see a progress window followed by a dialog box.

